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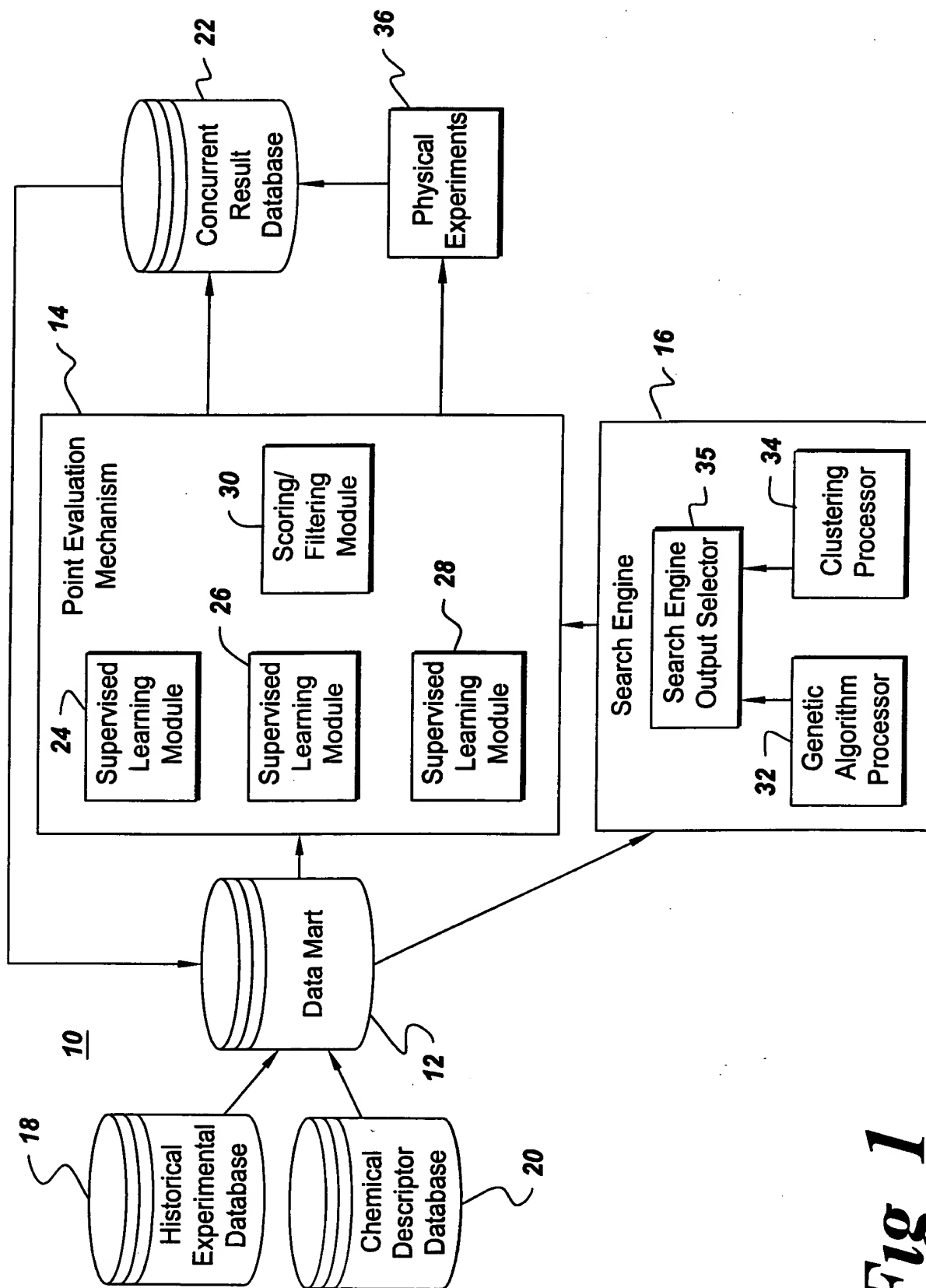


Fig 1

TABLE 2-5-60

40

Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu	Eu	Fe	Gd	In	Ir	La	Mn	Ni	ReO	Rh	Ru	TiO	Yb	Zn	Avg TON
0	0	0	1	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1802
1	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1711
1	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1698
0	0	0	0	0	0	1	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1671
1	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1670
0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1645
0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1645
0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1645
0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1645
0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1645
1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1645
0	0	0	1	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1623
0	0	0	0	0	0	0	1	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1621
1	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1614
0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1578
1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1550
0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1539
0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	1530
0	0	0	1	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	0	0	1521
1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1516
1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	1509
0	0	0	1	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1506

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Fig. 2



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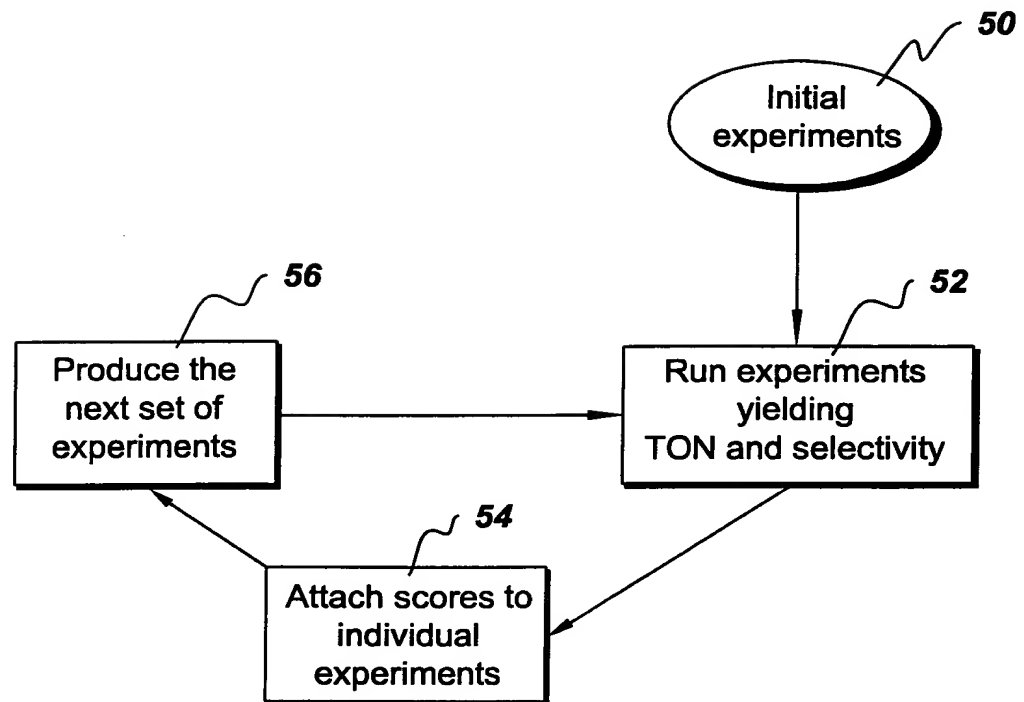
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44

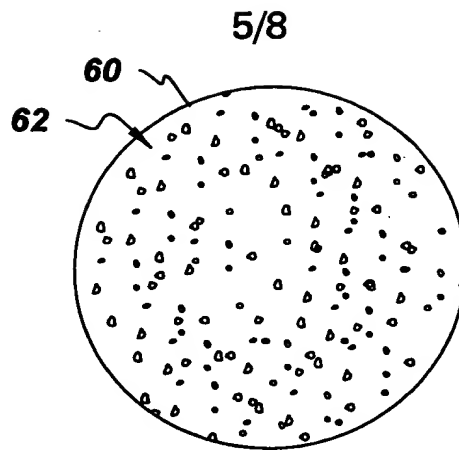
Metal	Electro-negativity	Atomic Radius	Covalent Radius	Ionization Potential	Atomic Ionization Potential				Electron Affinity
					I	II	III	IV	
Bi	1.67	1.7	1.46	7.29	7.29	16.16	25.56	45.3	0.95
Ca	1.04	1.97	1.74	6.11	6.11	11.9	50.908	67.1	0.18
Cd	1.46	1.54	1.48	9	8.99	16.91	37.48	NA	NA
Ce	1.06	1.81	1.65	5.53	5.47	10.85	20.2	36.72	NA
Co	1.7	1.3	NA	7.87	7.86	17.06	33.5	51.3	0.662
Cr	1.56	1.27	NA	6.76	6.76	16.5	30.96	49.1	0.666
Cs	0.86	2.67	2.25	3.89	3.89	25.1	NA	NA	0.47
Cu	1.75	1.28	1.38	7.73	7.726	20.29	36.83	55.2	1.235
Eu	1.01	2.04	1.85	5.68	5.67	11.25	24.9	NA	NA
Fe	1.64	0.68	0.72	7.9	7.87	16.18	30.65	54.8	0.151
Ga	1.82	1.4	1.26	6	6	20.51	30.71	64	0.3
In	1.49	1.66	1.44	5.79	5.78	18.87	28.03	54	0.3
Ir	1.55	1.36	NA	9	9.1	NA	NA	NA	1.565
La	1.08	1.86	1.69	5.61	5.57	11.06	19.1	NA	NA
Mn	1.6	1.26	NA	7.43	7.43	15.64	33.66	51.2	NA
Ni	1.75	1.24	NA	7.63	7.63	18.17	35.17	54.9	1.156
Pb	1.55	1.75	1.47	7.417	7.416	15.032	31.94	42.32	NA
Re	1.46	1.37	NA	7.87	7.9	NA	NA	NA	0.15
Rh	1.45	1.34	NA	7.46	7.46	18.08	31.06	NA	1.137
Ru	1.42	1.33	NA	7.37	7.37	16.76	28.47	NA	1.05
Sb	1.82	1.5	1.38	8.641	8.64	16.53	25.3	44.2	NA
Sn	1.72	1.5	1.41	7.344	7.34	14.63	30.5	40.7	NA
Ti	1.32	1.45	1.36	6.82	6.82	13.58	27.49	43.26	0.079
Yb	1.06	1.93	1.7	6.22	6.25	12.17	25	NA	0.5
Zn	1.66	1.38	1.31	9.39	9.394	17.964	39.722	59.4	NA
Zr	1.22	1.6	1.48	6.835	6.84	13.13	22.99	34.34	NA

Fig. 3

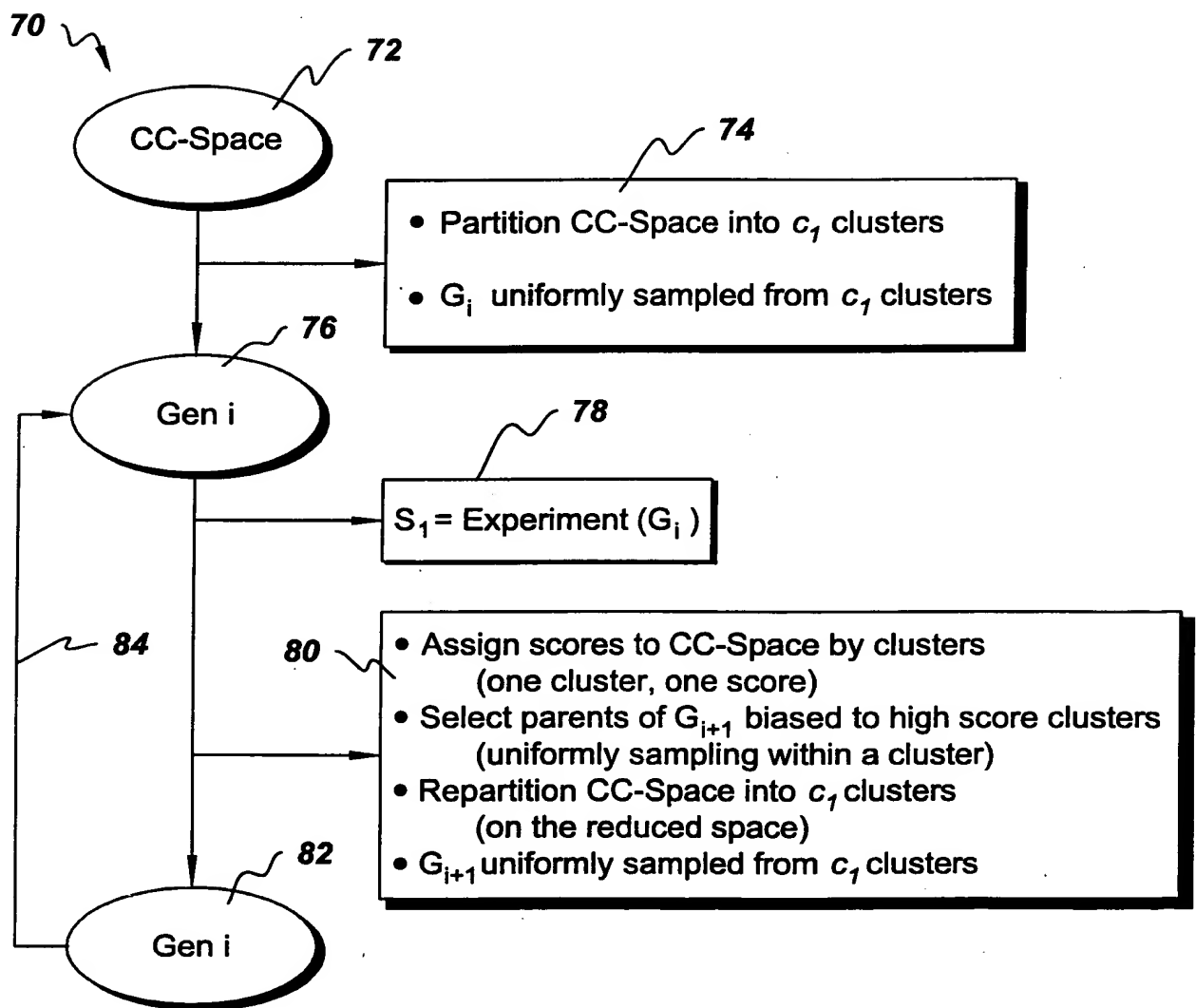
TABLE 1



***Fig. 4***

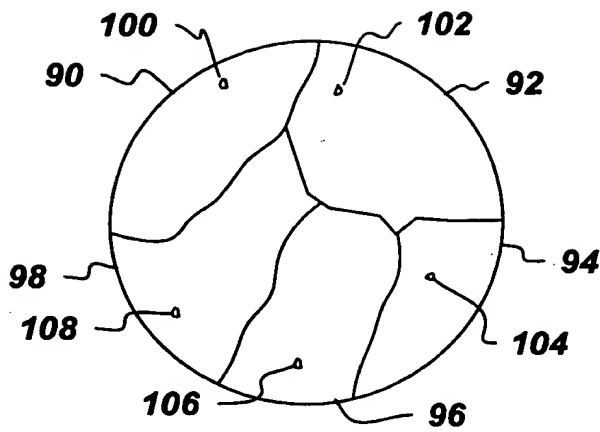
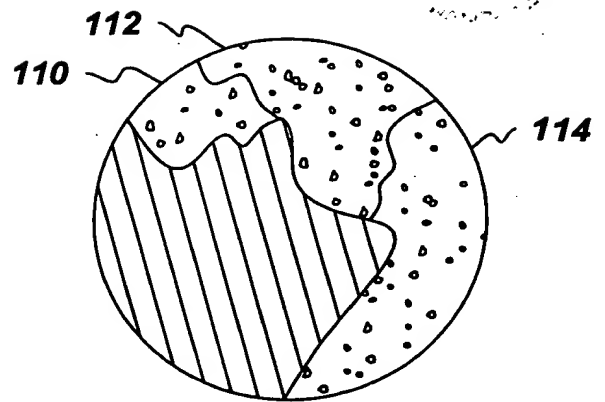
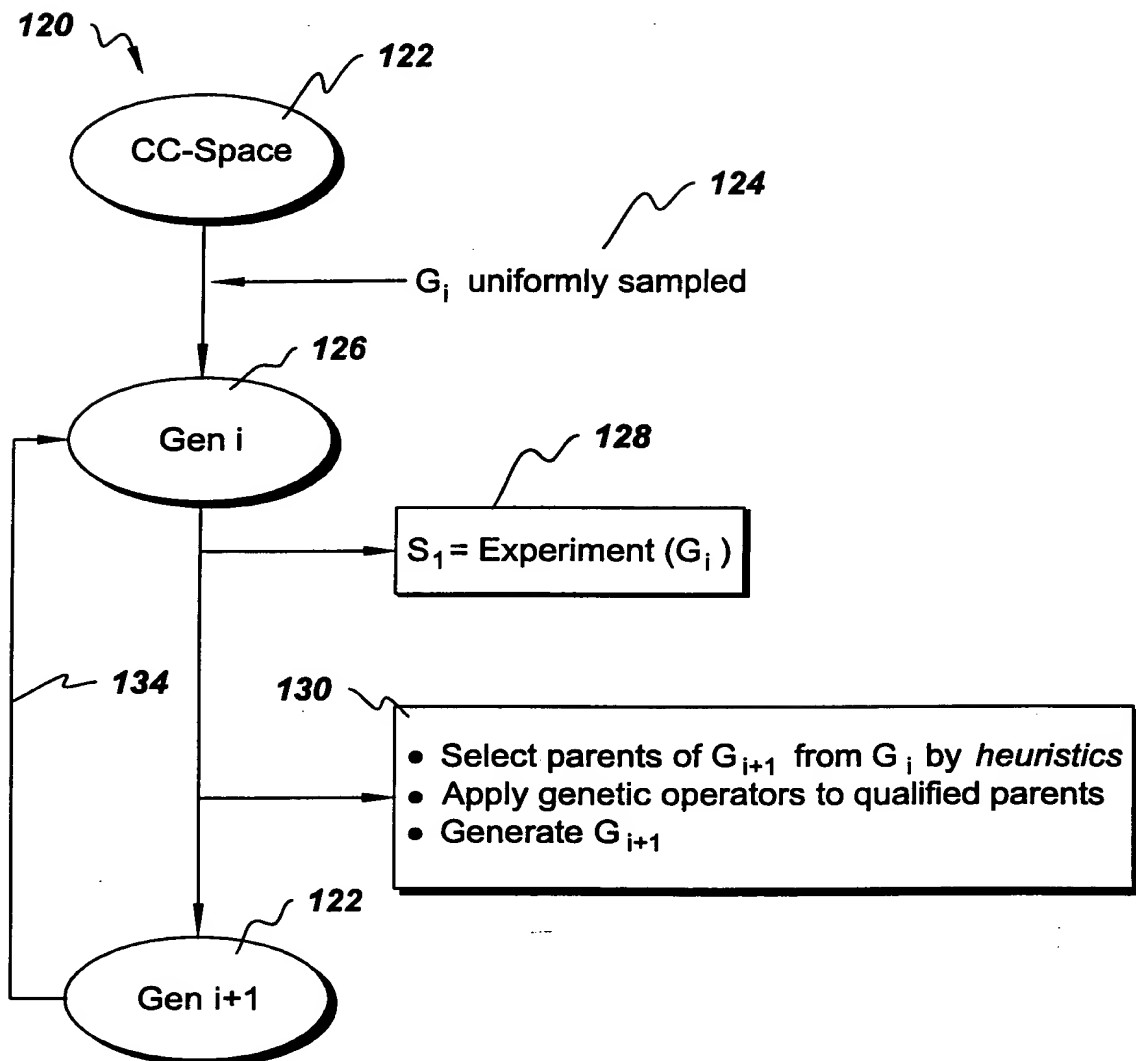


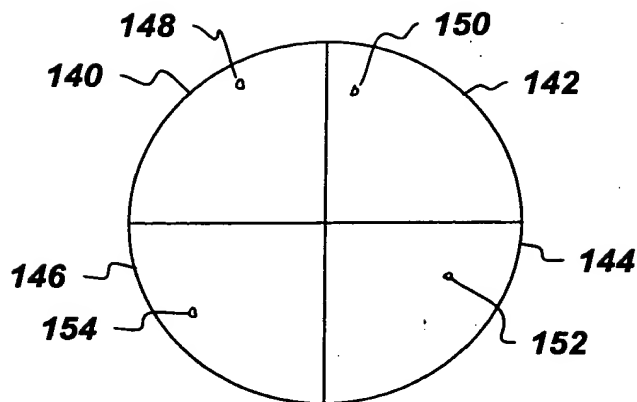
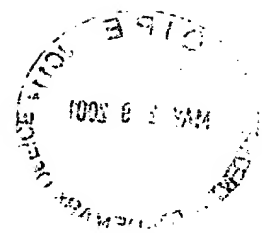
***Fig. 5***



**Fig 6**

1. 1. The first part of the report  
 2. 2. The second part of the report  
 3. 3. The third part of the report  
 4. 4. The fourth part of the report  
 5. 5. The fifth part of the report  
 6. 6. The sixth part of the report  
 7. 7. The seventh part of the report  
 8. 8. The eighth part of the report  
 9. 9. The ninth part of the report  
 10. 10. The tenth part of the report  
 11. 11. The eleventh part of the report  
 12. 12. The twelfth part of the report  
 13. 13. The thirteenth part of the report  
 14. 14. The fourteenth part of the report  
 15. 15. The fifteenth part of the report  
 16. 16. The sixteenth part of the report  
 17. 17. The seventeenth part of the report  
 18. 18. The eighteenth part of the report  
 19. 19. The nineteenth part of the report  
 20. 20. The twentieth part of the report  
 21. 21. The twenty-first part of the report  
 22. 22. The twenty-second part of the report  
 23. 23. The twenty-third part of the report  
 24. 24. The twenty-fourth part of the report  
 25. 25. The twenty-fifth part of the report  
 26. 26. The twenty-sixth part of the report  
 27. 27. The twenty-seventh part of the report  
 28. 28. The twenty-eighth part of the report  
 29. 29. The twenty-ninth part of the report  
 30. 30. The thirtieth part of the report  
 31. 31. The thirty-first part of the report  
 32. 32. The thirty-second part of the report  
 33. 33. The thirty-third part of the report  
 34. 34. The thirty-fourth part of the report  
 35. 35. The thirty-fifth part of the report  
 36. 36. The thirty-sixth part of the report  
 37. 37. The thirty-seventh part of the report  
 38. 38. The thirty-eighth part of the report  
 39. 39. The thirty-ninth part of the report  
 40. 40. The fortieth part of the report  
 41. 41. The forty-first part of the report  
 42. 42. The forty-second part of the report  
 43. 43. The forty-third part of the report  
 44. 44. The forty-fourth part of the report  
 45. 45. The forty-fifth part of the report  
 46. 46. The forty-sixth part of the report  
 47. 47. The forty-seventh part of the report  
 48. 48. The forty-eighth part of the report  
 49. 49. The forty-ninth part of the report  
 50. 50. The fiftieth part of the report  
 51. 51. The fifty-first part of the report  
 52. 52. The fifty-second part of the report  
 53. 53. The fifty-third part of the report  
 54. 54. The fifty-fourth part of the report  
 55. 55. The fifty-fifth part of the report  
 56. 56. The fifty-sixth part of the report  
 57. 57. The fifty-seventh part of the report  
 58. 58. The fifty-eighth part of the report  
 59. 59. The fifty-ninth part of the report  
 60. 60. The sixtieth part of the report  
 61. 61. The sixty-first part of the report  
 62. 62. The sixty-second part of the report  
 63. 63. The sixty-third part of the report  
 64. 64. The sixty-fourth part of the report  
 65. 65. The sixty-fifth part of the report  
 66. 66. The sixty-sixth part of the report  
 67. 67. The sixty-seventh part of the report  
 68. 68. The sixty-eighth part of the report  
 69. 69. The sixty-ninth part of the report  
 70. 70. The seventieth part of the report  
 71. 71. The seventy-first part of the report  
 72. 72. The seventy-second part of the report  
 73. 73. The seventy-third part of the report  
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 76. 76. The seventy-sixth part of the report  
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 78. 78. The seventy-eighth part of the report  
 79. 79. The seventy-ninth part of the report  
 80. 80. The eightieth part of the report  
 81. 81. The eighty-first part of the report  
 82. 82. The eighty-second part of the report  
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 84. 84. The eighty-fourth part of the report  
 85. 85. The eighty-fifth part of the report  
 86. 86. The eighty-sixth part of the report  
 87. 87. The eighty-seventh part of the report  
 88. 88. The eighty-eighth part of the report  
 89. 89. The eighty-ninth part of the report  
 90. 90. The ninetieth part of the report  
 91. 91. The ninety-first part of the report  
 92. 92. The ninety-second part of the report  
 93. 93. The ninety-third part of the report  
 94. 94. The ninety-fourth part of the report  
 95. 95. The ninety-fifth part of the report  
 96. 96. The ninety-sixth part of the report  
 97. 97. The ninety-seventh part of the report  
 98. 98. The ninety-eighth part of the report  
 99. 99. The ninety-ninth part of the report  
 100. 100. The hundredth part of the report

**Fig. 7****Fig. 8****Fig. 9**

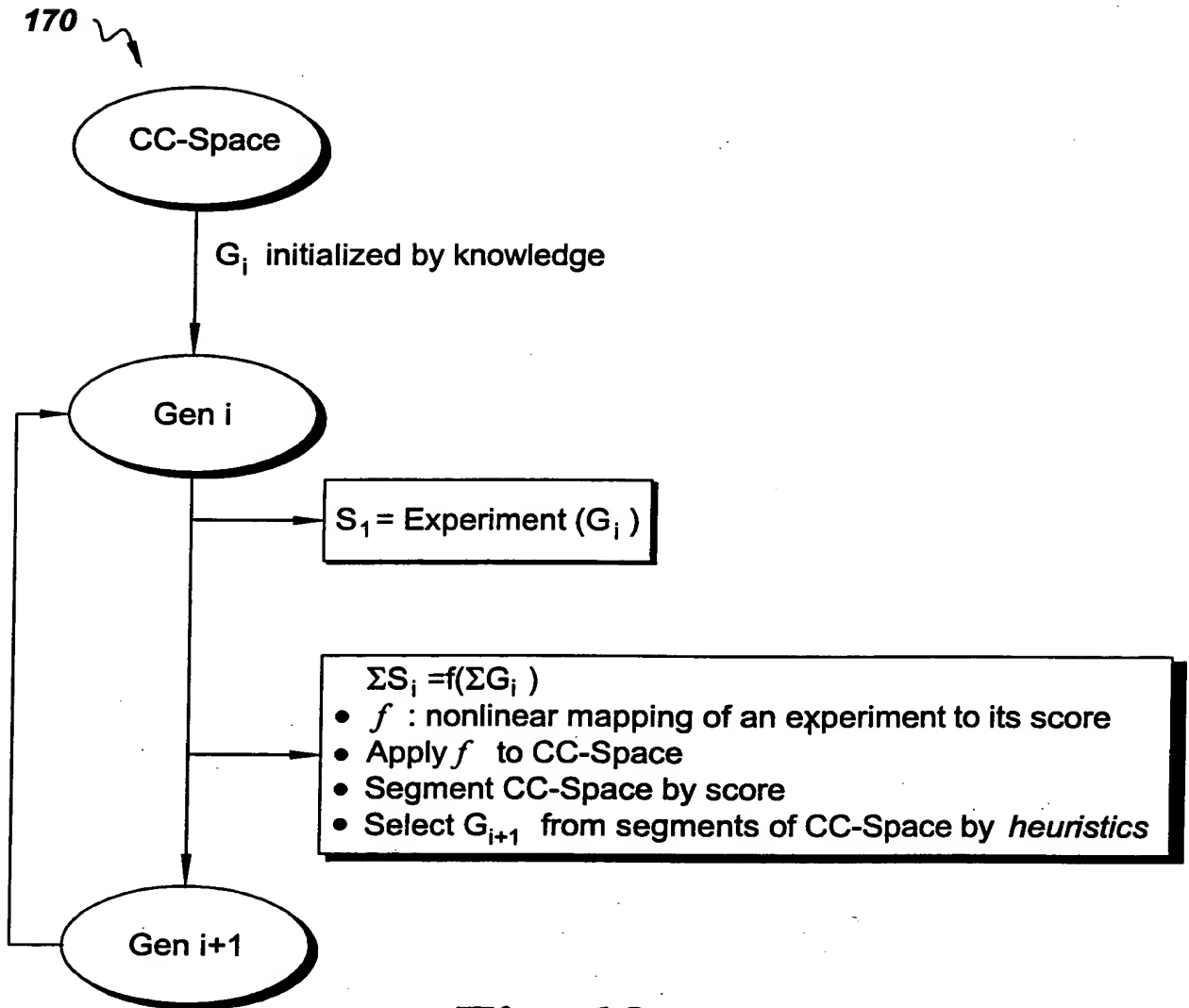


**Fig. 10**

160		162						164	
		166							
exp 1	Ca	Cu	Fe	•	•	•	•	Rh	Yb
exp 2	Cd	Eu	Fe	•	•	•	•	Yb	Zn
exp 3	Gd	Ir	La	•	•	•	•	Ni	Ru
•	•	•	•					•	•
•	•	•	•					•	•
•	•	•	•					•	•
•	•	•	•					•	•

**Fig. 11**

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**Fig. 12**